

Notes on Begoniaceae -- I.

Lyman B. Smith and Dieter C. Wasshausen

United States National Museum, Washington, D. C., U.S.A.

In preparing an illustrated key to all the natural species of Begoniaceae we have found a number of cases requiring changes in nomenclature where good species have illegitimate names or in taxonomy where we are unable to distinguish a species and are reducing it to synonymy or where a nomen nudum has been cited and we need to describe it to use it in the key. The order is strictly alphabetical. We are indebted to Jack Golding and Carrie Karegeannes for a thorough and very helpful editing of our preliminary manuscript.

BEGONIA

abaculoides Ziesenhenné, Begonian 35: 257 (1968); -- Begonian 36: 39 (1969).

= boissieri A. de Candolle, Ann. Sci. Nat. Bot. IV. 11: 126 (1859).

amoena Wallich, Num. List. 129. no. 3682 (1831) nomen nudum;  
Wallich ex A. de Candolle, Prodr. 15(1): 327 (1864);  
H. Hara in H. Ohashi, Fl. E. Himalaya 3: 85, pl. 5d (1975).

= dioica F. Hamilton ex D. Don, Prodr. Fl. Nepal 223 (1825).

arnottiana A. de Candolle, Prodr. 15(1): 322 (1864); C. B. Clark in Hooker f. Fl. Brit. Ind. 2: 641 (1879) [= cordifolia Thwaites, Enum. Pl. Zeyl. 129 (1859)]; L. B. Smith & D. C. Wasshausen, nomen legitimum, non cordifolia Thwaites (1859).

arnottiana is not equal to cordifolia Thwaites. The inflorescence of arnottiana has a simple axis while that of cordifolia is dichotomous.

bakeri Elmer, Leafl. Philipp. Bot. 10: 3706 (1939) non C. de Candolle, Bull. Herb. Boissier II. 8: 320 (1908).

= luzonensis Warburg in Perkins, Fragm. Flor. Philipp. 52 (1904).

calophylla Irmscher, Mitt. Inst. Allg. Bot. Hamburg 6: 351 (1927) non Gilg ex Engler, Veg. Erde 9 (3,2): 617 (1921).

= algala L. B. Smith & D. C. Wasshausen. nomen novum.

canaliculata Brade, Arq. Jard. Bot. Rio de Janeiro, 10: 132. pl. 1 (1950).

= sylvatica Meissner ex A. de Candolle, Ann. Sci. Nat. Bot. II. 11: 138 (1859).

The character of a sulcate stem by which Brade distinguishes canaliculata is also present in sylvatica although not described.

cariocana Brade, *Rodriguesia* 18: 26 (1945) nomen nudum; Brade ex L. B. Smith & D. C. Wasshausen. Sp. nov.

riedelii A. de Candolle var. latifolia Brade.  
nomen in eadem schedula cum Begonia cariocana.

(Verisimiliter ob similitudinem cum B. riedelii A. de Candolle). Planta caulescens, glabra. Caulis erectus; internodia longa. Florum masculinorum tepala 4.

Foliorum stipulae ignotae; petioli ad 4 cm longi; laminae valde inequilaterales, subellipticae, usque ad 22 cm longae, ultra 13 cm latae, late acutae, basi transverse cordatae, sinu lato instructae, extus et lateraliter late lobatae, irregulariter dentatae. Inflorescentia laxa, multiflora, dichasia 4-5 gerens, pedunculo ultra 18 cm longo instructa; bracteae ignotae. Fructus capsula, ca. 8 mm longa, alae valde inequales, ala maior late falcata, ultra 2 cm longa, ceterae subtriangulares. Pl. 1.

BRAZIL: RIO DE JANEIRO: Serra da Carioca, Rio de Janeiro (city), 17 December 1942, Edmundo Pereira 281, RB 47366 (holotypus GH, photo US; isotypus RB).

charadrophila Tutin, J. Bot. 78: 251 (1940).

= filipes Bentham, Bot. Voy. Sulph. (5): 101 (1845).

crassicaulis (A. de Candolle) Warburg in Engler & Prantl, Nat. Pflanzenfam. 3(6a): 149 (1894) non Lindley, Edward's Bot. Reg. 28: Misc. 22. pl. 44 (1842).

= pachyrhachis L. B. Smith & D. C. Wasshausen. nomen novum.

crispula Yü ex Irmischer, Notes Roy. Bot. Gard. Edinburgh, 21: 38. (1951), non Brade, Arq. Jard. Bot. Rio de Janeiro, 10: 134, pl. 3, 4 (1950).

= cirrosa L. B. Smith & D. C. Wasshausen. nomen novum.

cristata Warburg ex Koorders, Natuurw. Tijdschr. Ned.-Indië, 63: 90 (1904). nomen nudum; Warburg ex L. B. Smith & D. C. Wasshausen, sp. nov.

Planta e fragmentis solum cognita, caulescens, verisimiliter erecta, glabra. Foliorum stipulae ignotae; petioli ad 5 cm longi; laminae valde inequilaterales, elliptico-oblongae, ca. 19 cm longae, 7.5 cm latae, late subacutae apiculataeque, sinu profundo instructae sed lobi basales imbricati, extus late rotundato-lobatae, irregulariter dentatae. Inflorescentiae haud ramosae; flores pauci, axillares, fasciculatae; pedicelli graciles, breves; bracteae ignotae. Florum masculinorum tepala 4, elliptica, rotundata; stamina multa; antherae oblongae, connectivo producto obtuso instructae. Fructus capsula, subequaliter tripartita; alae subtriangulares, truncatae, obtusae. Pl. 2.

INDONESIA: CELEBES: "Leg. Sarason, N. Celebes, Tomoher (?), Apr. 94" (K, lectotype, photo US).

Evidently the original material in Berlin was lost, as the label on the Kew material says "ex Museum botanicum Berolinense" and we did not locate any material in Berlin. There may well be better material in Bogor but we must leave any emended description to whomever writes the Begoniaceae for Indonesia.

dielsiana Gilg, Bot. Jahrb. Syst. 34: 91 (1904) non E. Pritzel in Diels, Bot. Jahrb. Syst. 29: 479 (1900).

= cameroonensis L. B. Smith & D. C. Wasshausen. nomen novum.

Engler's West African species of Begonia have been very finely divided, as shown by de Wilde, but until he completes his studies we must take the species at face value.

elegans Elmer, Leaflets Philipp. Bot. 7: 255<sup>4</sup> (1915), non Humboldt, Bonpland & Kunth, Nov. Gen. Sp. 7: 182 (1825).

= sarmentosa L. B. Smith & D. C. Wasshausen. nomen novum.

erosa Wallich, Num. List 129, no. 3688 pro parte (1831) nomen nudum; A. de Candolle, Prodr. 15(1): 327 (1864)

[= amoena Wallich ex A. de Candolle (1864); C. B.

Clarke in Hooker f. Fl. Brit. Ind. 2: 642 (1879)

[= tenella D. Don, Prodr. Fl. Nepal 223 (1825)];

H. Hara in H. Ohashi, Fl. E. Himalaya 3: 85 (1975).

= dioica F. Hamilton ex D. Don, Prodr. Fl. Nepal 223 (1825).

fagopyroides Kunth & Bouche, Ind. Sem. Hort. Berol. 16. 1845.

= denticulata Humboldt, Bonpland & Kunth, Nov. Gen. Sp. 7: 182 (1825).

franconis Liebmann, Ved. Medd. Naturh. For. Kjøbenhavn 21 (1852)

= wallichiana sensu Lehmann in E. Otto, Neue Allg. Deutsche Garten-Blumenzeitung 6: 455 (1850) non Steudel, Nom. ed. 2. 1: 194 (1840); Doorenbos, Begonian 42: 213, fig. (1975).

This is a very confusing and unfortunate situation whereby an American species must assume a name closely associated with Indian botany. Steudel's publication wallichiana (Nomencl. ed. 2. 1: (1-2): 194. 1840 was evidently intended as a nomen novum for parviflora Hamilton ex Wallich, Num. List. 129, no. 367<sup>4</sup>. 1831, nomen, non Poeppig & Endlicher, 1835. However, since parviflora Hamilton ex Wallich was invalid there was no description and wallichiana Steudel was also invalid. Lehmann then tried to validate wallichiana of Steudel but based his description on a specimen in the Hamburg Hortus that was the same as franconis Liebmann. Thus the New World name franconis must be replaced by one in honor of a student of Indian botany.

gemella Warburg ex Koorders, Natuurw. Tijdschrift Ned.-Indië, 63: 91 (1904), nomen nudum; Warburg ex L. B. Smith & D. C. Wasshausen, sp. nov.

Planta imperfecte cognita, caulescens, glabra. Caulis repens, gracilis; internodia ca. 2 cm longa. Radices gracillimae, ex internodiis enascentes. Foliorum stipulae persistentes, lanceolatae, attenuatae, ca. 1 cm longae; petioli graciles ad 4 cm longi; laminae inequilaterales, suborbiculares, ad 8 cm longae, late acuteque sublobatae, basi oblique cordatae, alibi subintegrae. Inflorescentiae typi unisexuales, masculina ignota; feminea uniflora, axillaris; pedunculus 1 cm longus; bractae persistentes, late ovatae, acutae, 2 mm longae; pedicellus 7 mm longus. Fructus, capsula, subequaliter trialata; alae semi-orbiculares, truncatae, 1 cm longae. Pl. 3.

INDONESIA: CELEBES: "Minahassa, leg. Koorders, ex Museum botanicum Berolinense" (K, lectotypus, photo US).

hidalgensis L. B. Smith & Schubert, J. Wash. Acad. Sci. 40: 241, fig. 1, b-g (1950).

= *pinetorum* A. de Candolle, Ann. Sci. Nat. IV. 11: 131 (1859).

Material of this species ranges from the curved simple axis of typical *pinetorum* to the slightly irregular dichotomy of *hidalgensis*.

*hispidissima* Zippal ex Koorders, Meded. Lands Plantentuin, 19: 484 (1898), emend. L. B. Smith & D. C. Wasshausen.

Planta e fragmentis solum cognita, caulescens hispidissima. Caulis repens (?) vel erectus (?), ramosus; internodiis ad 7 cm longis. Foliorum stipulae persistentes, ovatae, acutae, ca. 1 cm longae; petioli ad 6 cm longi; laminae rectae vel obliquae, valde asymmetricae, oblongo-ellipticae, ad 11 cm longae, 5 cm latae, lateraliter paulo cordatae, late subacutae apiculataeque irregulariter dentatae. Inflorescentiae typi unisexuales, axillares, haud ramosae; pedunculi 15-17 mm longi; bracteae persistentes, ovatae, acutae, 5-6 mm longae; inflorescentia masculina racemosa, pauciflora; florum tepala exteriora suborbicularia; inflorescentia feminea biflora; axis brevissimus. Fructus capsula, ellipsoidea, 1 cm longa; alae subaequales, triangulares, truncatae. Pl. 4.

INDONESIA: CELEBES: Minahassa, hb. Koorders 162418 (K ex B, lectotypus, photo US).

The original description is legal but so brief as to be completely useless. Unfortunately the Warburg detailed manuscript in Bogor is not available.

*huberi* C. de Candolle ex Hubert, Bull. Herb. Boissier, II. 1: 315 (1901).

= *reniformis* Dryander, Trans. Linn. Soc. London, 1: 161, pl. 14, fig. 1, 2 (1791).

*inanis* Irmscher, Bot. Jahrb. Syst. 74: 616 (1949). *B. rosacea* sensu L. B. Smith in part, Phytologia 27: 212 (1973).

= *quetamensis* L. B. Smith & Schubert, Caldasia 4(16): 8, pl. 1 (1946).

*inermis* Irmscher, Bot. Jahrb. Syst. 76: 39 (1953).

= *reniformis* Dryander, Trans. Linn. Soc. London, 1: 161, pl. 14, fig. 1, 2 (1791).

Bot. Jahrb. Syst. in Hunt.

*kaietukensis* Tutin, J. Bot. 78: 250 (1940).

= *fischeri* Shrank Pl. Rar. Hort. Acad. Monac. 1: 659 (1820).

*koordersii* Warburg ex Koorders, Natuurw. Tijdschr. Ned.-Indië, 63: 91 (1904). *nomen nudum*; Warburg ex L. B. Smith & D. C. Wasshausen, sp. nov.

Planta e fragmentis solum cognita, caulescens, verisimiliter glabra. Caulis erectus; internodia ultra 8 cm longa. Foliorum stipulae ignotae; petioli ad 14 cm longi; laminae inequilaterales, late ovatae, ad 12 cm longae, duplicato-dentatae, basi oblique cordatae. Inflorescentiae typi unisexuales; masculina ignota; feminea biflora, axillaris; pedunculus brevissimus; bracteae persistentes, ca. 15 mm longis. Fructus capsula, paulo inequaliter alata; alae semiobovatae, truncatae; pedicelli ca. 1 cm longi. Pl. 5.

INDONESIA: CELEBES: Minahassa, hb. Koorders 162468 (K ex

B, lectotypus, photo US).

macgregorii W. W. Smith, Rec. Bot. Surv. India 6(4): 99 (1914), non Merrill, Philipp. J. Sci. Bot. 7: 310 (1912).

= burmensis L. B. Smith & D. C. Wasshausen, nomen novum.

nigrovenia Regel, Gartenfl. 16: 163, pl. 546 (1867).

= pinetorum A. de Candolle, Ann. Sci. Nat. IV. 11: 131 (1859).

opuliflora Putzeys, Fl. Serres Jard. Eur. I. 10: 71, pl. 995 (1855), emend L. B. Smith & D. C. Wasshausen.

Petiolis ad 4 cm longi.

The plate is obviously made from a living specimen with the same three-dimensional effect as that in a photograph. Thus most of the petioles are foreshortened, but the basal petiole is viewed sideways. We believe that Putzeys wrote from a superficial examination of the plate when he said "brevissime petiolatis" and that he was not viewing the live plant.

papillosa Lindley, Edward's Bot. Reg. 27: Misc. 39 (1841), non R. Graham in Hooker, Bot. Mag. 55: pl. 2846 (1828).

= bufoderma L. B. Smith & D. C. Wasshausen. nomen novum.

petropolitana Glaziov, Bull. Soc. Bot. France, 56, Mem. 3d: 324 (1909). nomen nudum.

= egregia N. E. Brown, Gard. Chron. 1: 346 (1887).

purpurea Swartz, Prodr. Veg. Ind. Occ. 86 (1788). nomen validum sed illegitimum.

= jamaicensis A. de Candolle, Ann. Sci. Nat. Bot. IV. 11: 124 (1859).

The name purpurea Swartz though validly published is superfluous and thus illegitimate. It is typified by B. obliqua Linnaeus. The taxon described by Swartz must be replaced by the next equivalent legitimate name if such exists.

purpurea Elmer, Leaflet. Philipp. Bot. 10: 3707 (1939), non Swartz, Prodr. Veg. Ind. Occ. 86 (1788).

= neopurpurea L. B. Smith & D. C. Wasshausen. nomen novum.

ragozinii Schwacke, Fl. Nov. Mineiras 2: 4, pl. 3 (1900).

= grisea A. de Candolle, Ann. Sci. Nat. Bot. IV. 11: 138 (1859).

reniformis Vellozo, Fl. Flum. 10: pl. 40 "1827" (1831), non Dryander, Trans. Linn. Soc. London, 1: 161. pl. 14, fig. 1, 2 (1791).

= fabulosa L. B. Smith & D. C. Wasshausen. nomen novum.

robinsonii Merrill, Philipp. J. Sci. Bot. 6: 375 (1912), non Ridley, J. Fed. Malay States Mus. 4(1): 22 (1909).

= perryae L. B. Smith & D. C. Wasshausen. nomen novum, for Lily M. Perry, co-author of many species of Begonia with E. D. Merrill.

salvadorensis Irmscher, Beitr. Biol. Pflanzen. 39: 440, fig. 2 (1963).

= udisilvestris C. de Candolle, Smithsonian Misc. Collect. 69(12): 9 (1919).

scabrida sensu J. D. Hooker, Bot. Mag. 120: pl. 7347 (1894).

= scabridoidea L. B. Smith & D. C. Wasshausen, sp. nov.

This differs from B. scabrida in its straight deeply cordate

leaf blades.

scandens Vellozo, Fl. Flum. Icon. 10: pl. 41 "1827" (1831) non Swartz, Prodr. Veg. Ind. Occ. 86 (1788).

= cerasiphylla L. B. Smith & D. C. Wasshausen. nomen novum.

setosa Klotzsch, Abh. Königl. Akad. Wiss. Berlin 31. 1855.

= fischeri Schrank, Pl. Rar. Hort. Acad. Monac. 2. pl. 59 (May 1820); Irmscher, Bot. Jahrb. Syst. 76:7 (1953).

simulans Irmscher, Bot. Jahrb. Syst. 76: 65 (1953), non Merrill & Perry, J. Arnold Arbor. 24: 52, fig. 5 e-i (1943).

= larorum L. B. Smith & D. C. Wasshausen. nomen novum.

subvillosa Klotzsch var. leptotricha (C. de Candolle) L. B. Smith & D. C. Wasshausen, comb. nov. stat. nov.

B. leptotricha C. de Candolle, Bull. Soc. Bot. Geneve II. 6: 121, fig. 4 (1914).

A var. subvillosa foliorum laminis supra pilis mollibus praeditis, seminibus late rotundatis differt.

In its acuminate to rounded seeds subvillosa closely parallels the variation in cucullata.

tenella D. Don, Prodr. Fl. Nepal, 223 (1825): H. Hara in H. Ohashi, Fl. E. Himalaya 3: 85 (1975).

= dioica F. Hamilton ex D. Don, Prodr. Fl. Nepal, 223 (1825).

toledoana Handro, Loefgrenia 39: 3. 1969, named in honor of Joaquim Franco de Toledo, is not to be confused with toledana L. B. Smith & Schubert, Caldasia 4(16): 26, pl. 5 (1946) named for a settlement in Colombia. The slight difference in orthography is enough to make the later name legal.

tuberosa Lamarck, Encycl. 1 (2): 393 (1785). nomen validum sed illegitimum.

= muricata Blume, Cat. Hort. Buitenzorg 103 (1823).

The name tuberosa Lamarck although validly published is superfluous and thus illegitimate. It is typified by capensis Linnaeus filius.

vitifolia Schott in Sprengel, Syst. 4: app. 407 (1827).

= reniformis Dryander, Trans. Linn. Soc. 1: 161. pl. 14, fig. 1, 2 (1791).

Plate 1





## Plate 2



*Begonia cristata* Warburg ex L. B. Smith & D. C. Wasshausen



## Plate 3



*Begonia gemella* Warburg ex L. B. Smith & D. C. Wasshausen

## Plate 4



*Begonia hispidissima* Zippal ex Koorders

## Plate 5



*Begonia koordersii* Warburg ex L. B. Smith & D. C. Wasshausen